```
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO      TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO      TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO      TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT        SSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO         TTT           SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO         TTT           SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO         TTT           SSSSSSSSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO         TTT                    SSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO            TTT        SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO            TTT        SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO            TTT        SSSSSSSSSSSS
```

```
                                                J  7
**FILE**ID**ACTIMAGE










  AAAAAA      CCCCCCCC  TTTTTTTTTT    IIIIII    MM      MM    AAAAAA      GGGGGGGG  EEEEEEEEEE
  AAAAAA      CCCCCCCC  TTTTTTTTTT    IIIIII    MM      MM    AAAAAA      GGGGGGGG  EEEEEEEEEE
AA      AA  CC              TT          II      MMMM  MMMM  AA      AA  GG          EE
AA      AA  CC              TT          II      MMMM  MMMM  AA      AA  GG          EE
AA      AA  CC              TT          II      MM  MM  MM  AA      AA  GG          EE
AA      AA  CC              TT          II      MM  MM  MM  AA      AA  GG          EE
AA      AA  CC              TT          II      MM      MM  AA      AA  GG          EEEEEEEE
AA      AA  CC              TT          II      MM      MM  AA      AA  GG          EEEEEEEE
AAAAAAAAAA  CC              TT          II      MM      MM  AAAAAAAAAA  GG  GGGGGG  EE
AAAAAAAAAA  CC              TT          II      MM      MM  AAAAAAAAAA  GG  GGGGGG  EE
AA      AA  CC              TT          II      MM      MM  AA      AA  GG      GG  EE              ....
AA      AA  CC              TT          II      MM      MM  AA      AA  GG      GG  EE              ....
AA      AA    CCCCCCCC      TT        IIIIII    MM      MM  AA      AA    GGGGGG    EEEEEEEEEE      ....
AA      AA    CCCCCCCC      TT        IIIIII    MM      MM  AA      AA    GGGGGG    EEEEEEEEEE      ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

Table of contents

```
0000          .TITLE  ACTIMAGE - ACTIVATE NEXT IMAGE
0000          .IDENT  'V04-000'
0000
0000    ;
0000    ;****************************************************************************
0000    ;*                                                                          *
0000    ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
0000    ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
0000    ;*  ALL RIGHTS RESERVED.                                                    *
0000    ;*                                                                          *
0000    ;*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED   *
0000    ;*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE   *
0000    ;*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
0000    ;*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
0000    ;*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
0000    ;*  TRANSFERRED.                                                            *
0000    ;*                                                                          *
0000    ;*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
0000    ;*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
0000    ;*  CORPORATION.                                                            *
0000    ;*                                                                          *
0000    ;*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
0000    ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0000    ;*                                                                          *
0000    ;*                                                                          *
0000    ;****************************************************************************
0000    ;
0000
0000    ;++
0000    ; FACILITY:     STANDALONE SYSGEN
0000    ;
0000    ; ABSTRACT:
0000    ;       This module allows an image to activate another image in its
0000    ;       place.  The running image is run down and the specified
0000    ;       image is activated.
0000    ;
0000    ; ENVIRONMENT:  User and Exec modes, P0 and P1 space
0000    ;
0000    ; AUTHOR:  STEVE BECKHARDT,     CREATION DATE:  26-Sep-1979
0000    ;
0000    ; MODIFIED BY:
0000    ;
0000    ;       V03-001 MSH0054         Michael S. Harvey       30-May-1984
0000    ;               Replace obsolete image activator scratch space symbol.
0000    ;
0000    ;--
```

```
        0000            .SBTTL  DECLARATIONS
        0000    ;
        0000    ; INCLUDE FILES:
        0000    ;
        0000
        0000    ;
        0000    ; MACROS:
        0000    ;
        0000
        0000    ;
        0000    ; EQUATED SYMBOLS:
        0000    ;
        0000
        0000    ;
        0000    ; OWN STORAGE:
        0000    ;
        0000
        0000
    00000000            .PSECT  BOO$ACTIMAGE,RD,NOWRT,EXE
```

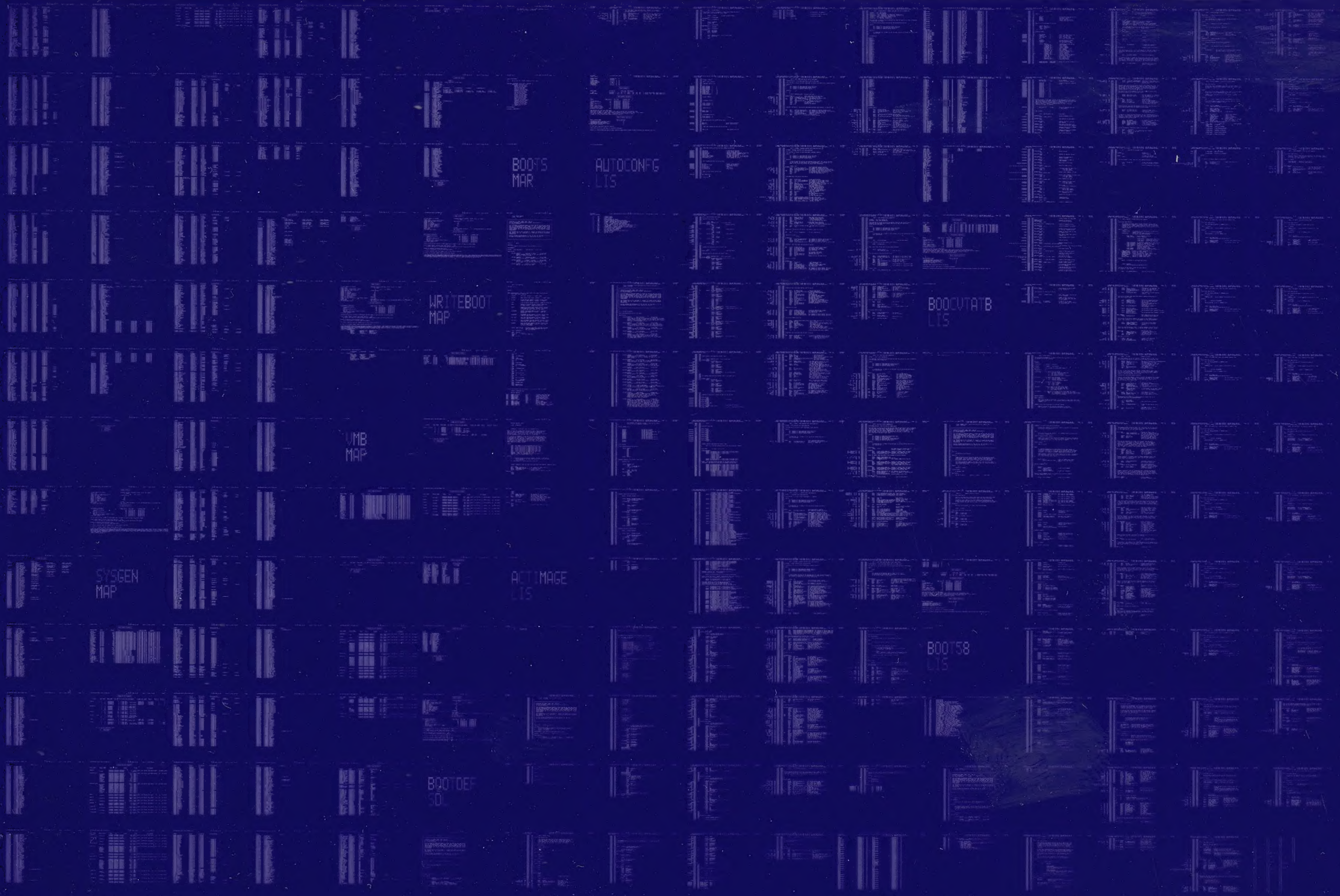
```
                           0000          .SBTTL  BOO$ACTIMAGE
                           0000  ;++
                           0000  ; FUNCTIONAL DESCRIPTION:
                           0000  ;
                           0000  ;       This routine runs down the current image and activates the
                           0000  ;       specified image.  It does this by copying code into the
                           0000  ;       image header buffer in the control region and jumping to it.
                           0000  ;       This code sets up the image name in the image header buffer
                           0000  ;       and then jumps into PROCSTRT to activate the image.
                           0000  ;
                           0000  ; CALLING SEQUENCE:
                           0000  ;
                           0000  ;       CALLS   BOO$ACTIMAGE
                           0000  ;
                           0000  ; INPUT PARAMETERS:
                           0000  ;
                           0000  ;       4(AP)           Address of image name descriptor
                           0000  ;
                           0000  ; IMPLICIT INPUTS:
                           0000  ;
                           0000  ;       NONE
                           0000  ;
                           0000  ; OUTPUT PARAMETERS:
                           0000  ;
                           0000  ;       NONE
                           0000  ;
                           0000  ; IMPLICIT OUTPUTS:
                           0000  ;
                           0000  ;       NONE
                           0000  ;
                           0000  ; COMPLETION CODES:
                           0000  ;
                           0000  ;       NONE
                           0000  ;
                           0000  ; SIDE EFFECTS:
                           0000  ;
                           0000  ;       NONE
                           0000  ;
                           0000  ;--
                           0000
                           0000  BOO$ACTIMAGE::
                     0000  0000          .WORD   0
                           0002
                           0002          $CMEXEC_S       B^10$,(AP)      ; Change to exec mode
                       04  000E          RET                             ; Should never return here
                           000F
                     007C  000F  10$:    .WORD   ^M<R2,R3,R4,R5,R6>
                           0011
             50    01  D0  0011          MOVL    #1,R0                   ; Exec mode
 5E   00000000'9F40    D0  0014          MOVL    @#CTL$AL_STACK[R0],SP   ; Reset exec stack
  56  00000000'9F      9E  001C          MOVAB   @#IAC$AL_IMGACTBUF,R6   ; Get address of image activator
                           0023                                          ; scratch area
   66    2E'AF    24'  28  0023          MOVC3   S^#CDSIZE,B^20$,(R6)    ; Move code
          55    04 AC  D0  0028          MOVL    4(AP),R5                ; Get address of image name descriptor
                   66  17  002C          JMP     (R6)                    ; Jump to moved code
                           002E
                           002E  20$:    ;
```

```
                             002E          ; This code doesn't get executed here.  Rather, it is moved
                             002E          ; into the image activator scratch area in the control region
                             002E          ; and executed there.
                             002E
     5C   00000000'9F   DE   002E          MOVAL   @#MMG$IMGHDRBUF,AP        ; Make AP point to image hdr buffer
                6C  65   D0  0035          MOVL    (R5),(AP)                 ; Move size of image name
        04 AC   08 AC   DE   0038          MOVAL   8(AP),4(AP)               ; Set up pointer to image name
   08 AC   04 B5   6C   28   003D          MOVC3   (AP),@4(R5),8(AP)         ; Move image name
                    03   DD  0043          PUSHL   #3                        ; Access mode to run down (user)
    00000000'GF     01   FB  0045          CALLS   #1,G^SYS$RUNDWN           ; Run down user mode
          00000000'GF    17  004C          JMP     G^EXE$PROCIMGACT          ; Activate image
                             0052
                  00000024   0052   CDSIZE = .-20$                           ; Size of code to move
                             0052
                             0052
                             0052
                             0052          .END
```

```
BOO$ACTIMAGE                       00000000 RG     01
CDSIZE                           = 00000024
CTL$AL_STACK                       ********   X    01
EXE$PROCIMGACT                     ********   X    01
IAC$AL_IMGACTBUF                   ********   X    01
MMG$IMGHDRBUF                      ********   X    01
SYS$CMEXEC                         ********  GX    01
SYS$RUNDWN                         ********   X    01

                                              +----------------+
                                              ! Psect synopsis !
                                              +----------------+

PSECT name                         Allocation          PSECT No.  Attributes
----------                         ----------          ---------  ----------
.  ABS  .                          00000000  (    0.)  00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
BOO$ACTIMAGE                       00000052  (   82.)  01 (  1.)  NOPIC   USR   CON   REL   LCL NOSHR   EXE   RD   NOWRT NOVEC BYTE

                                          +------------------------+
                                          ! Performance indicators !
                                          +------------------------+

Phase                         Page faults    CPU Time        Elapsed Time
-----                         -----------    --------        ------------
Initialization                         17    00:00:00.10     00:00:01.33
Command processing                     96    00:00:00.73     00:00:05.57
Pass 1                                 72    00:00:00.61     00:00:02.41
Symbol table sort                       0    00:00:00.00     00:00:00.00
Pass 2                                 32    00:00:00.30     00:00:00.67
Symbol table output                     2    00:00:00.01     00:00:00.01
Psect synopsis output                   1    00:00:00.02     00:00:00.02
Cross-reference output                  0    00:00:00.00     00:00:00.00
Assembler run totals                  220    00:00:01.78     00:00:10.02

The working set limit was 1200 pages.
1796 bytes (4 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 8 non-local and 2 local symbols.
141 source lines were read in Pass 1, producing 11 object records in Pass 2.
2 pages of virtual memory were used to define 2 macros.

                                         +--------------------------+
                                         ! Macro library statistics !
                                         +--------------------------+

Macro library name                       Macros defined
------------------                       --------------
_$255$DUA28:[BOOTS.OBJ]BOOTS.MLB;1                   0
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                       0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                    2
TOTALS (all libraries)                               2

13 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:ACTIMAGE/OBJ=OBJ$:ACTIMAGE MSRC$:ACTIMAGE/UPDATE=(ENH$:ACTIMAGE)+EXECML$/LIB+LIB$:BOOTS.MLB/LIB
```

0036 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY



BOOTS
MAR

AUTOCONFG
LIS

WRITEBOOT
MAP

BOOCVTATB
LIS

VMB
MAP

SYSGEN
MAP

ACTIMAGE
LIS

BOOT58
LIS

BOOTDEF
SDL